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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,533

04/26/2006

Martin Craig

046430.001

2384

25461 7590 02/25/2009
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EXAMINER

MCCARRY JR, ROBERT J

ART UNIT

PAPER NUMBER

3617

MAIL DATE

DELIVERY MODE

02/25/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,533	Applicant(s) CRAIG ET AL.	
	Examiner ROBERT J. MCCARRY JR	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-47 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 23-47 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/26/06, 6/7/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23, 25-27, 29-34, 38, 39, 41-44 and 47 rejected under 35 U.S.C. 102(b) as being anticipated by Cumpstey et al (EP 0269307).

Cumpstey et al discloses a pantograph collector for a railcar, shown in figure 1, comprising fiber bragg grating sensors 11 connected with the collectors at the top of the pantograph. The sensors 11 are equipped with strain gauges to determine the contact force of the pantograph on the overhead wire and transmit this force to a central processor on the railcar. The collectors and the sensors are mounted on a metal carrier comprised of the two articulated bars of the pantograph.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24, 28, 37, 40, 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cumpstey et al (EP 0269307) in view of Gleine et al (US 6,587,188).

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Cumpstey et al discloses the pantograph and sensor assembly as described above. However, Cumpstey et al does not disclose the fiber bragg grating sensor to be utilized to measure temperature of the collector assembly. Gleine et al discloses a sensor arrangement for measuring temperature and strain using a fiber bragg grating sensor. It would have been obvious to one of ordinary skill in the art to have used Gleine et al as a teaching to show that bragg grating sensors, like that used in Cumpstey et al, can be used to measure both strain and temperature. It would have been obvious to one of ordinary skill to have applied this teaching to a sensor, like that of Cumpstey et al with the expected result of using one sensor to measure two parameters that can damage electrical collectors and transmission systems.

Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cumpstey et al (EP 0269307) in view of Nakagi (JP 2002-187552)

Cumpstey et al discloses the pantograph and sensor assembly as described above. However, Cumpstey et al does not disclose the use of a global positioning system for indicating the position of the vehicle. Nakagi discloses a power system for a train comprised of a train equipped with a global positioning system. It would have been obvious to one of ordinary skill in the art to have applied a global positioning system, like that of Nakagi, to a vehicle system like that of Cumpstey et al with the expected result of utilizing both the fiber sensors in combination with a global positioning system with the expected result of allowing for better location information to be relayed along with the information of the fiber sensors to give both the train operators as well as offsite

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managers and maintenance crews better information about any mechanical issues with the vehicle as well as a better location of the vehicle.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT J. MCCARRY JR whose telephone number is (571)272-6683. The examiner can normally be reached on Monday through Friday 7:00am to 3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joseph Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. Joseph Morano/
Supervisory Patent Examiner, Art Unit 3617

/R. J. McCarry Jr./
Examiner, Art Unit 3617

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RJM

January 30, 2009